

To: Moore, Nikki[nmoore@blm.gov]
Cc: Sally Butts[sbutts@blm.gov]
From: Wootton, Rachel
Sent: 2017-07-03T13:37:10-04:00
Importance: Normal
Subject: Re: My edits on Basin and Range
Received: 2017-07-03T13:37:51-04:00
[Gold Butte review draft 6 28 17-for-review.docx](#)
[Cascade Siskiyou draft 6 28 17 for-review.docx](#)
[Basin and Range National Monument_for-review.docx](#)

Hi Nikki and Sally,

I hope your day is going well! I added the information you requested to the reports and attached them. I was not sure of the appropriate place to add it since they broke down the values by energy and non-energy minerals. We don't have New Mexico's edits yet.

I'll keep working on this this afternoon, but I am on my way to my doctors appointment and I'll telework the rest of the day!

Best,

Rachel

--

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On Mon, Jul 3, 2017 at 12:11 PM, Wootton, Rachel <rwootton@blm.gov> wrote:

Sure! I am happy to do that! I'll also respond to your questions via comments! When we hear from New Mexico, I'll send you the rest. I was waiting to send you all of them at once, but I can send you all of the non-New Mexico report comments now if you would like.

Best,

Rachel

--

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On Mon, Jul 3, 2017 at 12:03 PM, Moore, Nikki <nmoore@blm.gov> wrote:

Can you please add that very last paragraph to all of them? We also need to add it to the data summaries to all 18 but can do that later. It was approved by 300.

Nikki Moore

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Basin and Range National Monument

Economic Values and Economic Contributions

DRAFT



Basin and Range
National Monument

DRAFT June 28, 2017

Introduction

The purpose of this paper is to provide information on the economic values and economic contributions of the activities and resources associated with Basin and Range National Monument (BARNM) as well as to provide a brief economic profile of Lincoln County.¹

Background

The Basin and Range National Monument was designated in 2015 to protect cultural, prehistoric, historic, paleontological, and geologic resources in the Great Basin between the Sierra Mountains and Colorado Plateau. Spanning a total of approximately 703,500 acres in southeastern Nevada, about 526,000 acres are in Lincoln County, Nevada, with the remaining 177,000 acres in a remote area of northeastern Nye County, Nevada.² Prior to designation, the land was managed by the Bureau of Land Management (BLM) Ely Field Office, with the exception of approximately 4,400 acres of private inholdings that continue to exist within Monument boundaries. The designation does not affect grazing operations in the Monument, including use of motorized vehicles, construction and maintenance of water infrastructure, and construction of fences and other range improvements relating to grazing operations. Additionally, the designation does not affect U.S. military uses of the airspace and allows continued military access for emergency response and training activities.

Since the passage of the Lincoln County Conservation, Recreation, and Development Act of 2004, there has been over 768,000 acres of designated wilderness as components of the National Wilderness Preservation System in the county.³ One of these wilderness areas (Worthington Mountains Wilderness) is within the Monument boundary.

Public outreach

A public meeting regarding a proposal to withdraw land in the area from mining was held in February 2015. Since designation, six scoping meetings have been held in the surrounding communities to identify issues and planning criteria to be considered in the BLM

Basin and Range National Monument

Location: Lincoln County and Nye County, NV
 Managing agencies: BLM
 Adjacent cities: Ely, NV; Caliente, NV; Alamo, NV.
 Tribes: Shoshone; Paiute
 Resource Areas:
☒ Recreation ☐ Energy ☐ Minerals
☒ Grazing ☐ Timber ☒ Scientific Discovery
☒ Tribal Cultural

Table 1. Lincoln County and State of Nevada Economic Snapshot

Measure	Lincoln County, NV	Nevada
Population, 2016 ^a	5,194	2,798,636
Employment, December 2016 ^c	1,234	1,307,813
Unemployment rate, April 2017 ^b	3.9%	4.6%
Median Household Income, 2015 ^a	\$44,866	\$51,847

^aU.S. Census Bureau, 2011-2015 American Community Survey

^b<http://nevadaworkforce.com/>

^chttps://data.bls.gov/cew/apps/data_views/data_views.htm#tab=Tables.

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¹ The BLM provided data used in this paper.

² Approximately 4,400 acres (0.6% of the Monument) are private inholdings.

³ <https://www.gpo.gov/fdsys/pkg/PLA-W-108pub1424/pdf/PLA-W-108pub1424.pdf>

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Resource Management Plan and as part of complying with the National Environmental Policy Act.⁴ [The approved RMP is anticipated to be published in late 2018.⁵ In addition, in May 2017 the Nevada Legislature passed an assembly joint resolution (ARJ13) expressing support for the enactment and use of the Antiquities Act and the designation of the BARNM.⁶

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Local Economy and Economic Impacts

BARNM is located far from population centers and areas adjacent to the Monument are sparsely populated. The Monument has no facilities and few access roads. *Table 1* presents socio-economic metrics for Lincoln County and the state of Nevada. While 25% of the Monument is in Nye County, it is geographically not located near the areas of Nye County where the majority of the population resides.⁷ Lincoln County is a remote and rural area of Nevada containing roughly 0.2% of the State's population. The population of the county increased about 25% from 2000 to 2015, compared to a 40% increase in State population. Compared to the State, the percentage of household income associated with labor earnings was lower while the percentage of household income resulting from Social Security or retirement income was higher.

Activities and Resources

Information on the economic contributions associated with the activities occurring at Basin and Range National Monument are provided below.

- **Recreation:** A variety of recreation activities are available at BARNM including: dispersed camping, hiking, biking, OHV riding, rock climbing, wildlife and wild horse viewing, and viewing sites associated with cultural, prehistoric, and historic legacies. Hunting and trapping are also permitted as regulated by the State of Nevada. Visitor use has only been tracked through visitor registration sheets at the most popular petroglyph sites within the Monument, though BLM plans to install traffic counters in the fall of 2017 in order to more accurately track visitation. Estimates of visitation for FY 2016 range from 550 to 1,100 visitors. The value added associated with those recreation visits is estimated to be about \$35,000.
- **Energy:** There is no history of energy production in the area.
 - **Coal.** There have been no coal developments in the Monument area.
 - **Oil and gas.** There are currently no producing oil and gas wells within the Monument. The most recent well was drilled in 1996 and in the past 50 years, only four oil wells have been drilled; none were developed. There are several parcels with existing leases for oil and gas, and development on those existing leases could occur. Additionally, an application for permit to drill (APD) was approved in February 2016 for a lease that expires in 2020, though no wells have yet been drilled.⁸

⁴ Basin and Range National Monument Resource Management Plan Scoping Report, 2016.

⁵ <https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=88819>.

⁶ <https://www.lcg.state.nv.us/App/NELIS/REL/79th2017/Bill/5507/Overview>.

⁷ Over 80% of the population of Nye County resides in the Pahrump Census-designated place, which is an area bordering California to the west of Las Vegas.

⁸ BLM data.

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- **Geothermal.** The area included in the Monument is within an area identified by USGS as having medium geothermal favorability.⁹
- **Non-fuel minerals.**
 - While there has been historic mining in the area by early European and American settlers, there has been no recent locatable mineral production on lands within the Monument boundaries.
 - There are three existing gravel pits that are used by Lincoln County for road maintenance but are not sold pursuant to any market activities. The sand and gravel permits were issued in 2012 to Lincoln County for ten years. They will expire in 2022.
- **Timber.** There is no commercial timber production in BARNM but timber harvest activities such as non-commercial Christmas tree cutting and collection of wood for posts and firewood are allowed by permit. The Monument proclamation allows for the continuation of all pre-designation timber activities.
- **Grazing.** The allotments that are wholly or partially contained within the boundaries of BARNM include approximately 32,000 permitted Animal Unit Month (AUMs).¹⁰ About 10,200 AUMs were billed in FY 2016. Those AUMs were associated with economic output of about \$2.1 million and supported about 27 jobs. The Monument proclamation allows for the continuation of all pre-designation grazing activities, including use of motorized vehicles, construction and maintenance of stock watering facilities, and construction of fences and other range improvements related to grazing operations.
- **Tribal cultural, archeological, and historic resources.** Numerous tribes have ties to the BARNM area and the Monument contains resources that continue to be utilized by contemporary Native Americans. As over 90% of the Monument has not been inventoried for cultural resources, it is likely that there are many unknown cultural resources that have been neither documented nor evaluated for inclusion in the National Register of Historic Places.¹¹ Documented resources include prehistoric and historic artifacts and sites. There are two archaeological districts and several sites within the Monument to view petroglyphs. Traces of early Euro-American settlement, including mining structures, and the continuation of ranching lifestyles dating back to the late 19th century, also exist on the Monument. American artist Michael Heizer has been granted a Conservation Easement for his private land within BARNM, on which he is constructing a piece of art work that is similar in size to the National Mall. This work is expected to be completed in 2020 and has attracted interest in the art community.

Multiple Use and Tradeoffs Among Resource Uses

This section presents some information to help understand land management tradeoffs. Decision-making often involves multiple objectives and the need to make tradeoffs among those objectives. However, tradeoffs and decision making are often subject to constraints, such as Monument designations. In general, market supply and demand conditions drive energy and minerals activity; societal preferences

⁹ <https://pubs.usgs.gov/fs/2008/3082/>.

¹⁰ BLM measures an AUM as the amount of forage needed to sustain one cow and her calf, one domestic horse, or 5 sheep or goats for one month. <https://www.blm.gov/programs/natural-resources/rangelands-and-grazing/livestock-grazing/fees-and-distribution>.

¹¹ BLM data.

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and household disposal income affect recreation activity levels; and market prices and range conditions affect the demand for forage. Culturally important sites and unique natural resources, by definition, have limited or no substitutes and thus tradeoffs are typically limited. A particularly challenging component of any tradeoff analysis is estimating the nonmarket values associated with BARNM resources, particularly the nonmarket values associated with cultural and scientific resources.

Planning for permitted resource use on National Monuments will involve trade-offs among different activities on the land area being managed in order to allow permitted activities that are compatible with monument objects. National Monuments continue to be managed under the multiple-use and sustained yield criteria outlined in Federal Land Management and Policy Act of 1976. In some cases, certain areas of the Monument may be appropriate for more than one use. After the careful consideration of tradeoffs, management decisions in those cases may prioritize certain uses over others. In other cases, land areas may be more appropriate for a particular use and activities could be restricted to certain areas of the Monument. These decisions are based upon whether a use is compatible with the designation. Factors that could inform these tradeoffs include demand for the good or activity, prices, costs, and societal preferences. Other considerations might include the timeframe of the activity - how long the benefits and costs of a given activity would be expected to extend into the future. Trust responsibilities and treaty rights should also be considerations.

In considering any trade-offs, it is not just the level and net economic value associated with an activity that occurs in a given year that is relevant to decision making. Virtually all activities within the Monument occur over time and it is the stream of costs and benefits over a given period of time associated with each activity that is relevant. For example, recreation activities could continue indefinitely assuming the resources required for recreation remain intact and of sufficient quality for the activity. Likewise, the values associated with the natural and cultural resources could continue indefinitely provided they are not degraded by other activities. Grazing could also continue indefinitely as long as the forage resource is sustainably managed and remains consistent with the protection of monument objects. Timber harvest may also continue indefinitely as long as the timber resource is sustainably managed. The stream of costs and benefits associated with some other non-renewable resources would be finite, however (assuming these activities were consistent with the designation). For example, oil, gas, coal and minerals are all non-renewable resources and would only be extracted as long as the resource is economically feasible to produce.

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A black and white photograph showing a steep, rocky mountain slope in the foreground. The slope is covered with sparse, low-lying vegetation and several gnarled, dead-looking trees. The terrain descends towards a wide, flat valley in the middle ground. In the far distance, a large mountain range with a prominent, snow-capped peak is visible under a sky with scattered clouds. The overall scene conveys a sense of vastness and rugged natural beauty.

Colorado-Skiway National Monument Expansion Area

Legend:

- Colorado-Skiway National Monument Expansion Area
- BLM
- Private
- National Forest
- State

Scale: 0 1 2 Miles

North Arrow

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Introduction

The purpose of this paper is to provide information on the economic values and economic contributions of the activities and resources associated with Cascade-Siskiyou National Monument (CSNM or Monument). A brief economic profile of Jackson and Klamath Counties, OR, and Siskiyou County, CA, are also provided.

Background

The CSNM was established on June 9, 2000, by President Clinton (Proclamation 7318). The 65,000-acre Monument was the first such area to be established primarily to protect biodiversity. To date, BLM has acquired 13,355 acres of private inholdings within the original Monument boundary. Acquisitions have been by purchase (primarily through Land & Water Conservation Funds) or exchange (primarily legislated exchanges). President Obama issued Proclamation 9564 on January 12, 2017, expanding the Monument boundary by almost 48,000 acres to provide “habitat connectivity, watershed protection, and landscape-level resilience” for the area’s ecological and other values. Expansion of the Monument includes areas identified for their ecological contribution to the purposes of the original designation.¹ Together, these areas represent approximately 48,000 acres 42,349 in OR, and 5,275 in CA.

CSNM’s 113,341 acres accommodate hunting, fishing, recreation, and grazing. Valid existing rights such as timber sale contracts and rights-of-way, among other activities, are recognized. The historic and scientific resources identified in the Proclamation are protected, as well as providing opportunities for scientific study. The Monument contains rare and endemic plants such as Greene’s Mariposa lily, Gentner’s fritillary, and Bellinger’s meadowfoam. It also includes 38 miles of the Pacific Crest National Scenic Trail and the 24,707-acre Soda Mountain Wilderness within its borders. The CA portion of the expansion area is co-mingled with state lands managed by the California Department of Fish & Wildlife. The BLM lands are managed in a manner consistent with the state Wildlife Management Area. Activities are subject to decisions made in current and future BLM resource management plans (RMP), which include public participation. The CSNM lies entirely within the recognized aboriginal territory of the Klamath Tribes (Klamath, Modoc and Yahooskin Paiute). Traditional cultural plants and spiritual places, such as Pilot Rock, are important to the Shasta tribes. The CA portion of the expansion area includes the 320-acre Jenny Creek Area of Critical Environmental Concern (ACEC), which is associated with tribal spiritual values.

¹The expansion area includes the Horseshoe Ranch and Jenny Creek areas in Siskiyou County, CA; the upper Jenny Creek Watershed, the Grizzly Peak area, Lost Lake, the Rogue Valley foothills, the Southern Cascades area (including Moon Prairie and Hoxie Creek), all in Jackson County, OR; and some of the area surrounding Surveyor Mountain, including Old Baldy and Tunnel Creek wetland in Klamath County, OR.

Cascade-Siskiyou National Monument

Location: Jackson County, OR (original and expanded); Klamath County, OR, and Siskiyou County, CA (expansion area)

Managing agencies: BLM

Adjacent cities/counties/reservations:

- Natural and cultural resources of Klamath and Shasta Tribes (potentially other tribes)
- City of Ashland, OR
- Contains facilities owned and managed by the Bureau of Reclamation

Resource Areas:

- ☒ Recreation ☐ Energy ☐ Minerals
☒ Grazing ☒ Timber ☒ Scientific Discovery
☒ Tribal Cultural

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A substantial number of acres within both the original Monument and the expansion area are designated as Oregon and California Railroad Revested (O&C) Lands. These lands are covered by the O&C Act of 1937, which mandates that those lands determined to be suitable for timber production shall be managed for,

“permanent forest production and the timber shall be sold, cut and removed in conformity with the principal [stet] of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing the economic stability of local communities and industry, and providing recreational facilities.” Further, the O&C Act provides: “The annual productive capacity for such lands shall be determined and declared as promptly as possible after the passage of this Act, but until such determination and declaration are made the average annual cut therefrom shall not exceed one-half billion feet board measure: Provided, That timber from said lands in an amount not less than one-half billion feet board measure, or not less than the annual sustained yield capacity when the same has been determined and declared, shall be sold annually, or so much thereof as can be sold at reasonable prices on a normal market.”

There are currently three lawsuits pending on the designation of the CSNM expansion area related to O&C lands (Association of O&C Counties. v. Trump, No. 1:17-cv-00280-RJL (D.D.C. filed on February 13, 2017); Murphy Co. v. Trump, No. 1:17-cv-00285-CL (D. Or. filed on February 17, 2017); AFRC v. United States, No. 1:17-cv-00441-RJL (D.D.C. filed on March 10, 2017)). The Klamath County Portion of the CSNM expansion area is 99 percent O&C lands.

Public Outreach Prior to Designation

Prior to Monument designation, the area was designated as the Cascade Siskiyou Ecological Emphasis Area (CSEEA). The CSEEA, which did not include the monument expansion area, was established in the 1994 Northwest Forest Plan and the 1995 Medford District RMP primarily because of its unique, diverse ecological and biological characteristics. In developing the CSEEA RMP, BLM conducted five field tours and held one meeting in 1999, covering both OR and Northern CA. During the scoping period, the agency received 427 letters, cards, and e-mails, and recorded 153 comments from the public meeting. The majority of comments fell into two groups: those supporting the special ecological emphasis designation (218) and those against further restriction of public land uses (128). Some letters supported a more middle-ground approach (29), while others requested more information without voicing an opinion (47). After coding and analyzing the letters and comments, BLM identified 54 issues, including ecological concerns, land use, and government control, among others. The comments supporting the CSEEA designation generally emphasized preservation and restoration of ecological values. Those against the designation generally raised concerns about restrictions on access to public resources and increased Federal control over public and private lands. The CSEEA Draft Management Plan/Environmental Impact Statement distribution included seven tribes: Confederated Tribes of Siletz, Quartz Valley Indian Reservation (Shasta Tribes), Shasta Nation, Confederated Bands [Shasta] Shasta Upper Klamath Indians, Confederated Tribes of the Rogue-Table Rock and Associated Tribes, Confederated Tribes of Grand Ronde, and the Klamath Tribes. Proclamation 7318 drew heavily from the most-protective alternatives in the CSEEA Draft Plan.

Five studies/reports from the scientific community were provided to Interior from 2011 to 2015. Following these publications, 85 scientists sent a letter to former Secretary Sally Jewell requesting consideration of monument expansion in order to adequately protect the resources, objects, and values for which the original monument was designated. Senators Ron Wyden (D-OR) and Jeff Merkley (D-OR) introduced the *Oregon and California Land Grant Act of 2015* (S. 132), wherein a portion of the CSNM

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2017 expansion area was under the forest emphasis designation and a portion was under the conservation designation. In both cases, the intention was that timber harvest would take place within these designations. For the conservation designation the bill would take half of eligible acres off the table and spread them out over 50 years for the purpose of commercial thinning. This would only happen in stands less than 150 years in age. A public meeting was held in October 2016 in Ashland, OR, to hear public opinions about the CSNM expansion proposal. Approximately 500 people attended the meeting; a majority of speakers supported the expansion proposal. Attendees referenced the science-based rationale for expanding the Monument, including threats to the area's fragile natural resources, as well as benefits to the local tourism industry. The counties of Jackson (OR), Klamath (OR), and Siskiyou (CA) also hosted additional public meetings to allow for public input into the monument expansion. Collectively, approximately 600 people attended these county meetings.

A written comment period was sponsored by Senators Wyden and Merkley. A total of 5,488 comments were received with approximately three-fourths in favor of the expansion for scientific, recreational, environmental and economic reasons, among others. Opponents expressed concern that a larger Monument would hurt the region's economy with limits on logging and grazing. State Representatives Peter Buckley and Kevin Talbert, and the late State Senator Alan Bates, publicly endorsed the expansion. The two closest cities in OR, Ashland and Talent (City Councils, Mayors, and Chambers of Commerce), all formally endorsed expanding the Monument. The Klamath Tribes submitted a letter of support, noting that the expansion area is "critical to provide for more appropriate watershed scale management..." (November 2016). The Jackson County Board of Commissioners, Klamath County Board of Commissioners, Medford/Jackson County Chamber of Commerce, and Siskiyou County Supervisors expressed opposition to expansion. The objections included legal and economic impacts, as well as a lack of consensus on the scientific merits.

Local Economy and Economic Impacts

The CSNM is in Jackson and Klamath Counties, OR, and Siskiyou County, CA. As summarized in Table 1, Jackson and Klamath Counties account for 7% of the State of OR's population. Klamath County has a higher Native American population (6.3%) than the state and national levels. Siskiyou County has 0.1% of the population in CA with a higher Native American population (7.4%) than in the state and nation. All of the counties in the CSNM have higher unemployment rates and lower median household incomes than for the states. Although Klamath County's unemployment rate of 5.1% is higher than the state and national averages, the state of OR highlighted that this level is at or ties the historic low unemployment rate. The populations of Siskiyou and Klamath Counties have remained flat to a low increase over the past 20 years, while Jackson County has increased by over 42%.

The USDA Economic Research Service (ERS) has developed a set of county-level typology codes that captures a range of economic and social characteristics. The CSNM counties are classified as follows:

- Low Employment Klamath and Siskiyou Counties (less than 65% of residents age 25-64 were employed in 2008-2012)
- Retirement Destination Jackson County (number of resident 60 and older grew by 15 percent or more between 2000 and 2010)
- No dependence on farming, mining, or recreation, and no persistent poverty

Two reports reveal a growing economy in Jackson County since the original Monument designation, continuing previous growth trends. Non-service jobs, which were becoming an overall smaller share of the Jackson County economy before Monument designation, declined only 4% from 2001 to 2015.

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Activities and Resources Associated With CSNM

Activities taking place at CSNM include:

- **Recreation:** There were 198,213 visits to CSNM in 2016. This reflects average annual growth of 4.6% over 15 years. As summarized in Table 2, CSNM visitors spent approximately \$11.8 million in 2016, supporting 200 jobs and \$9.3M in value added in the local communities. This amounts to over \$24 of economic output per \$1 of the Monument's Fiscal Year 2015 budget. Table 3 compares pre- and post-designation average annual visits for select recreation activities and sites in both the original and expanded area. Hunting and fishing is regulated by the Oregon Department of Fish and Wildlife, which has data available on the numbers of licenses issued.
- **Energy:** There has been no production of coal, oil, gas, and renewables in the Monument since designation. The potential for these energy resources within the Monument is low to non-existent. The Bureau of Reclamation is producing hydropower and has critical infrastructure within the CSNM at Keene Reservoir. While the Green Springs Powerplant was not in the original Monument boundary, there are supporting facilities within the original boundary. The Green Springs Powerplant is in the CSNM expansion area. Information is not available at this time on whether Reclamation's facilities are impacted, either positively or negatively, by the CSNM expansion area. USGS [reported](#) that CSNM is adjacent (immediate east) to area of high geothermal favorability.
- **Energy Transmission.** There are 17.78 miles of electrical transmission lines in the original Monument. There are 17.82 miles of electrical transmission lines and 7.67 miles of gas line in the expanded Monument.
- **Non-Energy Minerals:** Since designation, no mineral materials has been commercially sold from within the CSNM. Mineral materials from CSNM quarries has been used to maintain Monument roads since designation, as described in the RMP/ROD for the Monument. There are no mining claims in the Monument. There were no mining claims in the expansion area during the five years prior to the Monument expansion.
- **Grazing:** BLM does not currently have data on the actual use of forage within and outside of the CSNM; the AUM numbers reported are for the entire allotment. Table 4 provides the permitted and billed AUMs for the original and extension areas of the Monument. As summarized in Table 2, about 6 jobs were supported by 974 AUMs related to the original Monument, generating about \$0.3 million in economic output in 2016. For the expansion area allotment, about 20 jobs were supported by 2,945 AUMs, generating about \$0.8 million in economic output in 2016.
- **Timber:** The Monument Proclamation states, "[t]he commercial harvest of timber or other vegetative material is prohibited, except when part of an authorized science-based ecological restoration project aimed at meeting protection and old growth enhancement objectives. Any such project must be consistent with the purposes of this proclamation. No portion of the monument shall be considered to be suited for timber production, and no part of the monument shall be used in a calculation or provision of a sustained yield of timber. Removal of trees from within the monument area may take place only if clearly needed for ecological restoration and maintenance or public safety."
 - **Within Original CSNM Designation.** 36,000 (0.036 million) board feet have been harvested; timber was removed only for the purposes of public safety.
 - **CSNM Expansion Area.** Since Monument expansion, approximately 310,000 (0.310 million) board feet have been harvested from within the OR portion of the expansion area under timber sale contracts that were entered into prior to January 12, 2017. These timber sales generated about \$200,000 in value added and supported an estimated 4 jobs. The contracts are considered valid existing rights and will be completed, including the approximately 2.9 million board feet of timber that remain to be harvested. Harvesting this timber, when and if it occurs, would generate economic contribution and support

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employment. The site conditions of the CA portion of the expansion area do not support commercial-grade timber resources.

- **Scientific Investigation:** The original Monument supports studies of ecology, evolutionary biology, wildlife biology, entomology, and botany. Proclamation 9564 notes that

“[s]ince 2000, scientific studies of the area have reinforced that the environmental processes supporting the biodiversity of the monument require habitat connectivity corridors for species migration and dispersal. Additionally, they require a range of habitats that can be resistant and resilient to large-scale disturbance such as fire, insects and disease, invasive species, drought, or floods...”

A May 2017 [publication](#) describes how big data and fine-scaled modeling were used to (1) evaluate an existing network of protected areas in the Klamath Siskiyou Bioregion of southern OR and northern CA (includes CSNM), and (2) to identify and prioritize new areas for protection. The study, funded by BLM and NPS, builds on the work of a number of state and federal partners, including USFS, USGS, and the Corps of Engineers. The authors used 16 Partners in Flight focal bird species as indicators of priority habitats and habitat conditions. They hypothesized that current protected area allocations do not have adequate abundance of some conservation focal species and their habitats. This hypothesis was tested using models to evaluate the region's network of federally managed lands and protected areas. Senator Merkley is quoted in several press releases: “This study offers robust scientific evidence that expanding the Cascade-Siskiyou National Monument provides critical protection to an amazing ecosystem found nowhere else in the world, and will serve Oregonians well for decades to come.”

- **Tribal Cultural Resources and Subsistence Living:** CSNM provides for the collection of certain natural materials by Native Americans under BLM permit. Dead and down wood is allowed to be collected for campfires within the CSNM, and the noncommercial gathering of fruits, nuts, berries, and mushrooms is also allowed. No data are available on the quantities harvested. The Klamath Tribe has cited the *American Indian Religious Freedom Act* (AIRFA) as the foundation for their support of the Maka Oyate Sundance ceremony, which is held annually within the Monument. However, AIRFA does not guide BLM management of the ceremony site. As already discussed above, the Klamath and Shasta tribes (potentially others) have natural, cultural, and spiritual values associated with the original and expanded areas.

“But for” the CSNM Designation

If the Monument had not been designated:

- **Recreation.** Annual visitation trends would likely not have substantially changed.
- **Energy.** There would still be no production of oil, gas and renewables, because the potential for these energy resources is low to non-existent.
- **Non-Energy Minerals.** It is likely that gravel production would have continued from the quarries had the Monument not been designated. Although speculative, it is possible that the pre-Monument expansion average of 342 cubic yards of rock would have continued to have been sold annually from quarries. The total value or amount of energy or mineral production foregone as a result of the designation cannot be determined. Although information may exist (e.g. USGS Mineral Resource Data) on past or present mineral history, mineral potential or minerals that may be prospectively valuable within and around the monument, developing a total value or a total value as a result of the designation would be highly speculative. Classification information typically only describes or refers to the potential presence (occurrence) of a concentration of one or more energy and/or mineral resource. It does not refer to or imply potential for development

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and/or extraction of the mineral resource(s) or determine the feasibility. It also does not imply that the potential concentration is or may be economic, that is, could be extracted processed and transported profitably.

- **Grazing:** It is likely that grazing would have continued within the original CSNM, as the legislated grazing buyout would likely not have occurred. Grazing would likely have continued at a similar level to the pre-designation utilization, as well as to post-designation levels in the expansion area. The two allotments that were vacant for the five years preceding original Monument designation (the Agate and Siskiyou allotments) likely would not have been utilized had the Monument not been designated, as outside factors appear to have led to their vacant status.
- **Timber:** In the absence of the original Monument and OR portion of the expansion area, additional timber production would be expected, as described below. The site conditions of the CA portion of the expansion area do not support commercial-grade timber resources.

Within Original CSNM Designation. Under the 1995 Medford District RMP, approximately 19,400 acres of BLM-administered lands were allocated to Southern General Forest Management Area with a primary objective of providing a sustainable supply of timber and other forest products. However, no current information is readily available regarding the amount of volume that may have been produced from these acres since Monument designation in 2000. It is well known that this part of the Ashland Resource Area is characterized by low site capabilities, and relative to other areas in the Medford District, is considered a low timber production area. Some timber harvest would have occurred for improving forest stand survival and growth, fuels reduction, pine site restoration, and regeneration harvest; however, it would be overly-speculative to estimate actual timber volumes that may have been produced.

CSNM Expansion Area. Based on preliminary analysis, the OR portion of the expansion likely reduces sustained yield timber production opportunities in the harvest land base by 4-6 million board feet per year, and commercial harvest in reserved land use allocations by 400,000 (0.400 million) board feet per year. Over a 50-year period in the harvest land base, annual sustained-yield timber harvest is projected to be 200 300 million board feet less than it would have been without the designation. This is due to explicit restrictions in the proclamation prohibiting sustainable timber harvest. Over the same 50-year period in reserve land use allocations, commercial harvesting would likely be reduced by 20 million board feet.

- **Scientific Investigation:** Scientific studies/reports and the 2015 open letter from 85 scientists²

²Alexander, J. D. et al. 2017. Using regional bird density distribution models to evaluate protected area networks and inform conservation planning. *Ecosphere* 8(5):e01799.

Frost, E., P. Trail and D. Odion. 2016. The ecological need to expand the Cascade-Siskiyou National Monument: Evidence from landscape-scale conservation assessments. Unpublished report, 12 pp. + maps.

Frost, E. and P. Trail. 2016. Objects of Interest in areas proposed for expansion of the Cascade-Siskiyou National Monument. Unpublished report, 81 pp.

Open letter from scientists, 2015. Recommended expansion of the Cascade-Siskiyou National Monument, signed by 85 natural resource scientists and submitted to Secretary of Interior Sally Jewell. May 28, 2015.

Trail, P. and E. Frost. 2015. Protecting the Cascade-Siskiyou National Monument from climate change: The ecological need for Monument expansion. Unpublished report, 14 pp.

Frost, E., D. Odion, P. Trail, J. Williams, J. Alexander, B. Barr, R. Brock, D. DellaSala, P. Hosten, S. Jessup, F. Lang, M. Parker, J. Rossa, D. Sarr and D. Southworth. 2011. Cascade-Siskiyou National Monument boundary study: Identification of priority areas for Monument expansion. Unpublished report, 14 pp.

DellaSala, D. A., et al. 1999. A global perspective on the biodiversity of the Klamath-Siskiyou ecoregion. *Natural Areas Journal* 19:300 319.

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provided scientific evidence and best professional judgment that the original boundaries were too small to ensure persistence of the many biological and macro-scale “Objects of Scientific Interest” that the Monument was originally established to protect. The interdisciplinary scientific group concluded that population pressures, adjacent land uses, and climate trends made the current boundaries inadequate. The expansion area is asserted to improve landscape and watershed connectivity with nearby federal lands, which help sustain populations of wide-ranging species.

- Tribal Cultural Resources and Subsistence Living:** The sites, uses, and special designations would still exist. BLM does not have sufficient information to predict whether designation has impacted cultural uses of the monument. However, the proclamation requires BLM to provide access by members of Indian tribes for traditional cultural and customary uses, consistent with the American Indian Religious Freedom Act (42 U.S.C. 1996) and Executive Order 13007 of May 24, 1996 (Indian Sacred Sites). The Klamath Tribes commented on the need to protect Jenny Creek as part of their commitment to restoring anadromous fish to the Upper Klamath River Basin, and to protecting and restoring resident species. They wrote, “Maintaining and improving the health and water quality of tributary streams to the Klamath River, such as Jenny creek, is vital to future anadromous fish restoration efforts and to provide for future viability of the unique species that currently the streams. Species of particular concern are the Jenny Creek redband trout and Jenny Creek suckers” (November 2016).

Table 1. State and County Economic Snapshot

Measure	Jackson County, OR	Klamath County, OR	State of OR	Siskiyou County, CA	State of CA
Population, 2016 ^a	208,363	65,972	3,939,233	43,895	38,421,464
American Indian and Alaska Native (alone or in combination) population as a percent of the total ^a	2.9%	6.3%	3%	7.4%	1.9%
Unemployment Rate, April 2017 ^b	4.3%	5.1% ^c	3.7%	7.4%	4.5%
Median Household Income, 2015 ^a	\$44,028	\$40,336	\$51,243	\$37,170	\$61,818

^aU.S. Census Bureau, 2011-2015 American Community Survey; Native American population alone or in combination with one or more other races.

^bhttps://www.bls.gov/eag/eag_or.htm

^cThe State of OR reports that this is at or ties the historic low unemployment rate.

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Table 2. Estimated Economic Contributions, 2016

Activities	Economic Output, \$ millions	Value added (net additions to GDP), \$ millions	Employment supported (number of jobs)
Recreation*	16.6	\$9.3M	200
Grazing	1.1	Grazing value- added is not available	26
Timber	0.6	0.2	3
Cultural resources	Unquantifiable; some values would be included in recreation		

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Table 3. CSNM Average Annual Visits per Select Recreation Activities and Sites

Recreational Activities & Sites	Prior to Original Designation (1998-2000) ^{a,b}	Original Designation (2000-2017)	Prior to Expansion (2012-2017)	Expansion (2017-2017)
Backpacking	N/A ^c	2,839	N/A	N/A
Camping	57,625	17,658	81,018	N/A
Fishing	2,088	7,856	3,240	N/A
Hiking/Running	29,090	255,736	81,021	N/A
Hunting, Big Game	23,001	114,981	48,611	N/A
Skiing XC	N/A	37,026	N/A	N/A
Snowmobiling	N/A	6,061	N/A	N/A
Hyatt Lake CG	13,928	19,976	7,206	N/A
Hyatt Lake Day-Use	N/A	284	966	N/A
BuckPrairie Winter Trails	Not in Original Monument	Not in Original Monument	23,966	N/A
Wildcat CG	2,224	6,056	1,130	N/A
Pacific Crest Trail	1,921	17,812	17,812	N/A
Grizzly Peak Trails	Not in Original Monument	Not in Original Monument	5,526	N/A
Table Mt. Tubing Hill	Not in Original Monument	Not in Original Monument	2,496	N/A

^aAll data are derived from the Recreation Management Information System (RMIS).^bRMIS data are not available prior to 1998, so data prior to original Monument designation cover only a 2-year period.^cN/A -- data are not available or were not collected.

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Table 4. AUMs Permitted and Billed, CSNM, 1995-2016

Year	Original CSNM Designation			CSNM Expansion Area		
	Permitted Use	AUMs Billed	% Billed	Permitted Use	Sold AUMS	% Billed
1995	6,002	3,406	56.70%	N/A	N/A	N/A
1996	6,002	4,180	69.60%	N/A	N/A	N/A
1997	6,002	4,158	69.30%	N/A	N/A	N/A
1998	6,002	4,333	72.20%	N/A	N/A	N/A
1999	6,002	4,537	75.60%	N/A	N/A	N/A
2000	6,002	4,190	69.80%	N/A	N/A	N/A
2001	5,793	3,661	63.20%	N/A	N/A	N/A
2002	5,350	3,348	62.60%	N/A	N/A	N/A
2003	5,350	3,690	69.00%	N/A	N/A	N/A
2004	5,350	3,967	74.10%	N/A	N/A	N/A
2005	5,350	4,746	88.70%	N/A	N/A	N/A
2006	5,350	3,418	63.90%	N/A	N/A	N/A
2007	5,350	3,264	61.00%	N/A	N/A	N/A
2008	5,350	2,026	37.90%	N/A	N/A	N/A
2009	1,437	763	53.10%	N/A	N/A	N/A
2010	1,317	1,009	76.60%	N/A	N/A	N/A
2011	1,317	1,074	81.50%	N/A	N/A	N/A
2012	1,317	1,217	92.40%	2,833	2,691	95.00%
2013	1,317	1,217	92.40%	2,833	2,659	93.90%
2014	1,317	1,217	92.40%	2,833	3,067	108.30%
2015	1,317	974	74.00%	2,833	2,851	100.60%
2016	1,317	974	74.00%	2,833	2,945	104.00%

Source: BLM.



Gold Butte National Monument

Economic Values and Economic Contributions

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Introduction

The purpose of this paper is to provide information on the economic values and economic contributions of the activities and resources associated with Gold Butte National Monument (GBNM).¹

Background

Gold Butte National Monument was designated in 2016 for purposes of protecting an array of historic and scientific resources, including critical habitat of the threatened desert tortoise, the once-thought-extinct relic leopard frog, archaeological sites, areas of spiritual significance to Native American tribes, historic ranching and mining sites, rare endemic plants, and dinosaur tracks. The monument covers roughly 297,000 acres in Clark County, NV and lies between the eastern boundary of Lake Mead National Recreation Area and the western boundary of Grand Canyon-Parashant National Monument; it is bordered by these Federal lands to the east, west, and south. Prior to designation, all land within the Monument was Federal land, the majority of which was managed by the BLM's Las Vegas Field Office with the exception of approximately 11,800 acres that had been managed by the Bureau of Reclamation. In addition, nearly all of the land had been protected under an Area of Critical Environmental Concern (ACEC) designation since the corresponding Resource Management Plan (RMP) was updated in 1998. Parts of the Monument were also designated as Wilderness or Wilderness Study Areas prior to Monument designation.

Public outreach

Legislation for protecting the Gold Butte area has been introduced repeatedly since a proposal to designate it as a National Conservation Area was made in 2008. In 2015, a public meeting hosted by Nevada Senator Harry Reid and Representative Dina Titus was attended by representatives of DOI. The Nevada State Legislature passed a joint resolution (ARJ13) expressing support for the designation of the GBNM.²

Local Economy and Economic Impacts

GBNM is located in Clark County, NV. The economy in Clark County is dominated by Las Vegas, where the most important industries are gaming, entertainment, and tourism. The nearest populated area and access point to GBNM, Mesquite, NV, has an economic profile similar albeit significantly smaller -

Gold Butte National Monument

Location: Clark County, NV

Managing agency: BLM

Adjacent cities/towns: Mesquite, NV

Adjacent Federal lands: Grand Canyon-Parashant National Monument; Lake Mead NRA.

Resource Areas:

☒ Recreation ☐ Energy ☐ Minerals
☒ Grazing ☐ Timber ☒ Scientific
 Discovery ☒ Tribal Cultural

¹ The BLM provided data used in this paper.

² <https://www.leg.state.nv.us/App/NELIS/REL/79th2017/Bill/5507/Overview>

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- to Las Vegas based on U.S. Census Bureau estimates of employment by industry, with over a third of civilians employed in the arts, entertainment, recreation, accommodation, and food service industries.³

Definitions

Value Added: A measure of economic contributions; calculated as the difference between total output (sales) and the cost of any intermediate inputs.

Economic Value: The estimated net value, above any expenditures, that individuals place on goods and services; these are particularly relevant in situations where market prices may not be fully reflective of the values individuals place on some goods and services.

Employment: The total number of jobs supported by activities.

Activities and Resources

Information on the economic contributions associated with the activities occurring at Gold Butte National Monument are provided below.

- Recreation.** The opportunities for outdoor recreation in GBNM include camping and hiking, although there are no designated or marked hiking trails and no developed campgrounds or other facilities within the Monument. Most vehicle routes are unmaintained dirt roads and recommended for 4-wheel drive only. The temperatures in the area can be extreme. Hunting is permitted and is regulated by the State of Nevada. For the period including FY 2016 and the first half of FY 2017, it is estimated that there have been around 21,000 visits. During the years 2012-2015 there were an average of 88,576 visits annually. This level of annual visitation is associated with an estimated \$4.3 million in value added and supported about 71 jobs. Economic values, in contrast to economic contributions, represent the net value, above and beyond any expenditures, that individuals place on goods and services. It is not appropriate to sum values for economic contributions and economic values because they represent different metrics. The economic value associated with the average number of visits over FY 2012-2015 is estimated to be about \$5 million.⁴
- Energy.** There is no energy transmission infrastructure or recent history of energy production in the area and the land within the Monument has not been surveyed by the USGS for potential for coal or oil and gas.⁵ The production of coal, oil, gas, and renewable energy was restricted when these areas were designated as ACECs in the 1998 RMP. Prior to this, there were leases or lease applications for oil and gas on the "Gold Butte A" ACEC, part of which is now within Monument boundaries, but no producing wells were drilled. This is the only portion of the Monument that was formerly open to fluid mineral leasing subject to no surface occupancy stipulations; the rest of the Monument had been closed to leasable minerals (e.g., coal, oil, gas, and geothermal resources) prior to designation of the Monument. The total value or amount of energy or mineral production foregone as a result of the designation cannot be determined. Although information may exist (e.g. USGS Mineral Resource Data) on past or present mineral history, mineral potential or minerals that may be prospectively valuable within and around the monument,

³ 2015 ACS 5-Year Estimates, Comparative Economic Characteristics

⁴ The estimate of economic value is based on the general recreation value for the Intermountain Region from the USGS Benefits Transfer Toolkit (<https://my.usgs.gov/benefit-transfer/activity/display/6980#averageValues>).

⁵ USGS data.

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developing a total value or a total value as a result of the designation would be highly speculative. Classification information typically only describes or refers to the potential presence (occurrence) of a concentration of one or more energy and/or mineral resource. It does not refer to or imply potential for development and/or extraction of the mineral resource(s) or determine the feasibility. It also does not imply that the potential concentration is or may be economic, that is, could be extracted processed and transported profitably.

- **Non-fuel Minerals.** While there has been historic mining in the area by early European and American settlers, there has been no recent locatable mineral production on lands within the Monument boundaries. Two historic mining districts occupied parts of what is now GBNM, and the mining history of these districts is characterized by “much development and exploration but little production”. Limited amounts of copper, nickel, cobalt, platinum, tungsten, mica, and beryllium were produced in one mining district and minor amounts of gold, silver, copper, lead, zinc, and mica were produced in the other. USGS mineral resource assessments found varying degrees of potential for other minerals, including uranium, gypsum, low-sulfide gold-quartz, vermiculite, crushed-rock aggregate, and sand and gravel aggregate. Nearly all of the land within the monument was closed to mineral materials in the 1998 Las Vegas RMP and then withdrawn from mineral entry in 2002 by the Clark County Conservation of Public Land and Natural Resources Act. There are two mining claims currently located in GBNM that could potentially be developed in the future but production would first require a validity exam due to the 2002 mineral withdrawal.⁶
- **Timber.** There are no commercial timber resources in GBNM. Seed collection is allowed by permit in areas that are not desert tortoise habitat.
- **Grazing.** Livestock grazing has not been permitted in the monument area since 1998, and the proclamation does not allow for any new grazing permits or leases within the monument. Grazing allotments for all ACECs in the area under management by the Las Vegas Field Office were bought out by Clark County in the 1990s.⁷ There are, however, two allotments administered by the Arizona Strip Field Office that are also partially within Monument boundaries. One allotment is ephemeral and one has less than 15% of its acreage within Monument boundaries⁸. It is estimated that the number of billed AUMs for this portion of the monument in recent years is fewer than 500; the economic contributions for this level of grazing are not significant.⁹
- **Tribal cultural, archeological, scientific, and historic resources.** There are a variety of non-commodity resources in GBNM that the Monument designation sought to protect. This includes sites of spiritual significance and ancestral grounds of the Moapa Band of Paiute, rock art and petroglyphs, the abandoned mining town of Gold Butte and other pioneer-era structures, unique and endemic plants such as the Las Vegas bearpoppy, and critical habitat for the desert tortoise. The previous designation as an ACEC was specifically for the purpose of protecting historic and prehistoric archeological resources, including rock shelters and caves, roasting pits, campsites,

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⁶ BLM data.

⁷ EA for Route Designations for Selected ACECs Located in the North East Portion of Clark County within the Las Vegas BLM District, 2007

⁸ BLM data.

⁹ BLM measures an AUM as the amount of forage needed to sustain one cow and her calf, one domestic horse, or 5 sheep or goats for one month. <https://www.blm.gov/programs/natural-resources/rangelands-and-grazing/livestock-grazing/fecs-and-distribution>.

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stone tools, projectile points, rock art, lithic scatters, pottery fragments, historic mining artifacts, historic mining towns, and historic mines.

In recent years, rock faces, including those containing prehistoric petroglyphs, have been found defaced with graffiti and bullet holes. Parts of pioneer-era structures, including historic stock corrals, have been stolen and even burned for firewood, as well as sustained damage due to bullet holes. An illegal water system has been found trenched throughout terrain that is considered protected habitat for the threatened Mojave Desert tortoise, the development of which was done without the necessary NEPA compliance.

Multiple Use and Tradeoffs Among Resource Uses

This section presents some information to help understand land management tradeoffs.

Decision-making often involves multiple objectives and the need to make tradeoffs among those objectives. However, tradeoffs and decision making are often subject to constraints, such as Monument designations. In general, market supply and demand conditions drive energy and minerals activity; societal preferences and household disposal income affect recreation activity levels; and market prices and range conditions affect the demand for forage. Culturally important sites and unique natural resources, by definition, have limited or no substitutes and thus tradeoffs are typically limited. A particularly challenging component of any tradeoff analysis is estimating the nonmarket values associated with GBNM resources, particularly the nonmarket values associated with cultural and scientific resources.

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Planning for permitted resource use on National Monuments will involve trade-offs among different activities on the land area being managed in order to allow permitted activities that do not impair monument objects. In some cases, certain areas of the Monument may be appropriate for more than one use. After the careful consideration of tradeoffs, management decisions in those cases may prioritize certain uses over others. In other cases, land areas may be more appropriate for a particular use and activities could be restricted to certain areas of the Monument. Factors that could inform these tradeoffs include demand for the good or activity, prices, costs, and societal preferences. Other considerations might include the timeframe of the activity - how long the benefits and costs of a given activity would be expected to extend into the future. Trust responsibilities and treaty rights should also be considerations.

In considering any trade-offs, it is not just the level and net economic value associated with an activity that occurs in a given year that is relevant to decision making. Virtually all activities within the Monument occur over time and it is the stream of costs and benefits over a given period of time associated with each activity that is relevant. For example, recreation activities could continue indefinitely assuming the resources required for recreation remain intact and of sufficient quality for the activity. Likewise, the values associated with the natural and cultural resources could continue indefinitely provided they are not degraded by other activities. Grazing could also continue indefinitely as long as the forage resource is sustainably managed and remains consistent with the protection of monument objects. Timber harvest may also continue indefinitely as long as the timber resource is sustainably managed. The stream of costs and benefits associated with some other non-renewable resources would be finite, however (assuming these activities were consistent with the designation). For example, oil, gas, coal and minerals are all non-renewable resources and would only be extracted as long as the resource is economically feasible to produce.

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